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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,426	11/20/2001	Chun-Pu Hsu	MR2349-730	8566
4586	7590	10/30/2006	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			NGUYEN, TRAN N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	09/988,426		HSU, CHUN-PU	
	Examiner		Art Unit	
	Tran N. Nguyen		2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005 and 28 Aug 06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

The applicant's petition, filed on 11/22/05, to revise the application, via filing an RCE, has been granted on 8/28/06. Therefore, the amendment, filed on 11/15/03, is hereby entered and considered on the merit as amendment.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the recitation "the stator ring made of a rigid material with a property of not being easily bendable" and "whereby the engaging method ... with the rigid material, the easy-assembly and easy alignment property of the stator teeth and the pre-winding of copper wire is thereby attained" is indefinite because of the following:

The terms "*rigid material with property of not being easily bendable*" being indefinite because of the terms "*rigid*", "*easily bendable*" are relative terms because they are not specifically defined by the claim "what is a defined measurable level would be considered "*rigid*" or what is a defined measured level would be considered "*easily bendable*"; also, by the same token, what is a defined measured level would be considered "easy assembly and easy alignment". The specification does not provide a standard for ascertaining the requisite degree,

and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Also, the recitation “the stator ring made of a rigid material with a property of not being easily bendable” is indefinite because the recitation does not provide any metes and bound for the limitations. In other words, with the recitation, one skilled in the art would not be able to figure out what kind of material, i.e., metallic or nonmetallic material, magnetic or nonmagnetic metal, fluid or gas or powder material, that has certain characteristics. Thus, with this recitation, one skilled in the art would not be able to figure out or determine whether there is a patentable infringement or not. *According to MPEP section 2171, two Separate Requirements for Claims Under 35 U.S.C. 112, Second Paragraph:*

(1) the claims must set forth the subject matter that applicants regard as their invention; and

(2) *the claims must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant.* (Emphasis added).

In this case, the applicant fails to provide any specific and known properties, for example properties such as metallic or nonmetallic, electrical conducting or non-electrical conducting, magnetic or nonmagnetic of the so-called “rigid material”.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Forbes et al (US4712035)** in view of **Nitta et al (US 6265804)** and **Chen (US 5859487)**.

Forbes discloses an inner stator structure having a stator ring (35) and a plurality of stator teeth, each of the stator teeth having an insulating stage (figs 1-10) and each stator tooth having a pre-wound coil prior to insert the stator tooth' flank. Forbes substantially discloses the claimed invention, except for the following limitations:

(a) the ring is divided into a plurality of units of equal size, each unit having a concave end and a convex end for assembling adjacent units into an annular ring, wherein the respective concave ends engaged with respective convex ends cannot be separated in a lateral direction.

(b) the two axial-end closing rings for the stator assembly, particularly each said closing ring being formed by a plurality of closing ring portions joined together, and each of said closing ring portions having connecting ends for coupling to adjacent closing ring portions

Regarding the limitations listed in subsection (a), Nitta teaches a motor with a stator ring (7) (figs 2, 10, 11) divided into a plurality of units of equal size, wherein each unit having a concave end and a convex ends (42a, 42b), i.e., dovetail connecting ends, for assembling adjacent stator units together, the configuration of the dovetail wedge concave and convex ends would obviously prevent the stator units from being separated in a lateral direction. Nitta teaches that the configuration of the stator units would reduce the iron loss since the stator ring is divided so that amounts of magnetic flux passing through the adjacent portions become the same; also,

the divided core would enhance the mechanical stress tolerance so that deformation of the stator core would be minimized.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Forbes' motor by embodying the stator structure being divided into a plurality of units of equal size each unit having a concave end and a convex end for assembling adjacent units into an annular ring, wherein the respective concave ends engaged with respective convex ends cannot be separated in a lateral direction, as taught by Nitta. Doing so would enable the reduction of the iron loss therein and minimize mechanical deformation of the stator core.

Regarding the limitations listed in subsection (b), Chen, however, teaches a stator having annular closing rings (30), each annular closing ring has a closing ring portions (31) and connecting ends (32) on both top and bottom sides thereof, and the connecting end (32) that connecting the closing ring portions (31) to form the annular closing ring (fig 6). Chen teaches that the annular closing rings (30) with closing portions for stator teeth, each closing rings are disposed at respective above and below ends of the stator core (1) would increase in area of magnetic conduction to improve the horsepower of the motor.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the prior-art motor by embodying the closing rings on both top and bottom sides thereof, and having connecting end that integrally connecting the closing rings, as taught by Chen. Doing so would provide means to enhance the stator's efficiency.

Double Patenting

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over one the following:

- claim 1 of U.S. Patent 6583530 (hereafter, USP '530);
- claims 1, 4-5 of U.S. Patent 6,404,095 (hereafter USP'095)
- claims 1, 2-3 of U.S. Patent 6,400,059 (hereafter USP'059)

in view of **Nitta et al (US 6265804)** and **Chen (US 5859487)**.

Each of the patented inventions, USP '530, USP'095, and USP'059, is claimed a stator ring having a plurality of stator ring divided segments that are connected by connecting features.

USP '530 specifically recites the stator ring being formed by a plurality of units of equal size, each unit having a concave end on one end thereof and a convex end on another end thereof, the concave end having a complementary shape with respect to the convex end and a rear wall portion with a width dimension larger than a mouth portion of the concave end, wherein an assembled stator ring with respective concave ends engaged with respective convex ends cannot be separated in a lateral direction, and the width dimension of the outer end of the tooth tail being smaller than a width dimension of the tooth flank; a plurality of insulating stages respectively mounted on the stator teeth, each insulating stage having a hollow post on which a winding is mounted, the post being disposed on a respective tooth flank of a corresponding tooth.

USP'095 or **USP'059** each specifically recites an assembled type motor outer stator comprising: an outer stator ring (broadly read as a stator ring as in the present claimed invention); a plurality of stator teeth with a distal end of the tooth root being extended with a

root distal end; an inner end of the root distal end having a width smaller than that of an outer end of the root distal end and having a shape correspondent to the inlaying groove of the outer ring; a maximum width of an outer end of the root distal end being not larger than a width of the root end; a plurality of insulating wire seat, and wherein the outer stator ring is exploded into a plurality of equal unit parts; left and right ends of each unit are formed with respect to the right and left ends of the adjacent unit through engaged ends thereof, the units are tightly combined; therefore, a complete and non-separable outer stator ring with fixing angle is formed. This read as the complementally shaped fastening features of the stator ring divided segments so that the segments are connected via these fastening features.

Thus, each of USP '530, USP'095, and USP'059 claimed similar invention of the present application, except for the limitations of

(a) the stator ring's plurality of units of equal size with each unit having a concave end and a convex end for assembling adjacent units into an annular ring, wherein the respective concave ends engaged with respective convex ends cannot be separated in a lateral direction.

(b) the two axial-end closing rings for the stator assembly, particularly each said closing ring being formed by a plurality of closing ring portions joined together, and each of said closing ring portions having connecting ends for coupling to adjacent closing ring portions

Regarding the limitations listed in subsection (a), Nitta teaches a motor with a stator ring (7) (figs 2, 10, 11) divided into a plurality of units of equal size, wherein each unit having a concave end and a convex ends (42a, 42b), i.e., dovetail connecting ends, for assembling adjacent stator units together, the configuration of the dovetail wedge concave and convex ends would obviously prevent the stator units from being separated in a lateral direction. Nitta teaches that the configuration of the stator units would reduce the iron loss since the stator ring is divided so that amounts of magnetic flux passing through the adjacent portions become the same; also, the divided core would enhance the mechanical stress tolerance so that deformation of the stator core would be minimized.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Forbes' motor by embodying the stator structure being divided into a plurality of units of equal size each unit having a concave end and a convex end for assembling

adjacent units into an annular ring, wherein the respective concave ends engaged with respective convex ends cannot be separated in a lateral direction, as taught by Nitta. Doing so would enable the reduction of the iron loss therein and minimize mechanical deformation of the stator core.

Regarding the limitations listed in subsection (b), Chen, however, teaches a stator having annular closing rings (30), each annular closing ring has a closing ring portions (31) and connecting ends (32) on both top and bottom sides thereof, and the connecting end (32) that connecting the closing ring portions (31) to form the annular closing ring (fig 6). Chen teaches that the annular closing rings (30) with closing portions for stator teeth, each closing rings are disposed at respective above and below ends of the stator core (1) would increase in area of magnetic conduction to improve the horsepower of the motor.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the prior-art motor by embodying the closing rings on both top and bottom sides thereof, and having connecting end that integrally connecting the closing rings, as taught by Chen. Doing so would provide means to enhance the stator's efficiency.

Conclusion

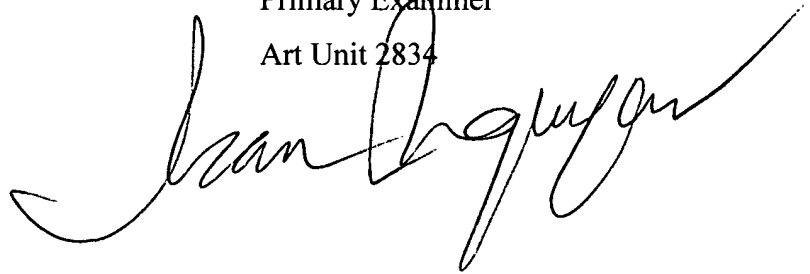
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is 571-272-2030. The examiner can normally be reached on 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. (**Note: Use this Central Fax number 571-273-8300 for all official response.**)

Do **not** use the Examiner's RightFax number without informing the Examiner first because, according to the USPTO policy, any document being sent via RightFax is treated as unofficial response and will not be officially dated until it is routed to the Central Fax.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tran N. Nguyen
Primary Examiner
Art Unit 2834

A handwritten signature in black ink, appearing to read 'Tran N. Nguyen', is written over the printed name and title. The signature is fluid and cursive, with a large initial 'T' and 'N'.